## CONTENTS

											Page
Sales Talk (Commentary)											1
Weather Forecasting; Part II-Present and I	Future.	R.	G. VE	RYAR	D						2
Synthetic Rubbers in the Post-War World. S.	H. M	ORREI	L								7
Reactive Dyestuffs-A New Method of Approa	ich to	Dyein	g. I.	D. R	ATTEE						15
Power Transistors. D. S. GRANT, R. O. JONES											21
Computers and Instruments											25
Nuclear Propulsion. J. EDWARDS											26
The Scientific Advisory Board of Research											37
Survey											38
Book Reviews					•			•	•		39
Paying Your Money (Commentary)			•	•	•	•	,		•		41
The Irradiation of Plastics. T. R. Manley			•		4	•				*	42
Large Scale Preparation of Ultra-Pure German	nium	T M	Wir	· IAON					,		47
The ELF Screen. E. A. SACK	mun.	J. 141	. WIL	SON		•	•		•	*	54
Mechanical Seals for Rotary Shafts. O. P. H.	A NISONA	•									61
											-
Sugar Detergents. N. PILPEL	•	*			*						68
The Shortest Radio Waves. D. Walsh .		*									75
Survey											76
Book Reviews											79
Technology and the Academics (Commentary)											81
Some Australian Research on Wool; Part I—				mistr	v of W	ool.	F. G.	LENN	OX		82
Large Scale Preparation of Ultra-Pure Silicon.	. J. M	. WIL	SON						0		91
Pressurized Packaging. A. Herzka											97
Production and Measurement of Ultra-High V	/acua.	J. D	UTTON	1							103
Science and Malting. A. H. Cook and J. R. A	A. POL	LOCK									108
Golden Jubilee of the Indian Institute of Scien	nce										113
Survey											116
Book Reviews											118
A Paradox in Finish Turning (Letter to the Ed	ditor).	V. Sc	DLAJA								119
Street Lighting (Commentary)											121
Some Australian Research on Wool; Part II-	-Wool	Text	le Pro	cessii	ne. M	Lip	SON				122
Some Optical Characteristics of Semiconducto											127
											133
Extreme Pressure Lubricants. N. PILPEL			•				•				141
The Use of Radioactive Isotopes; Part I—Eng	ainaari	na An	nlicati	ione	CG	Cu	VTON				148
Docile Sequence Engine—A New Type of Mod	dal for	ng Ap	piicuii	Mack	ina E	CLA	V Do				155
Survey		u Leu			ine. r			NALDS	NON	*	159
Book Reviews						•					161
Ageing of Active Titanium Dioxide (Letter to	de E	liana)	N. T	Don		*				*	162
The Age of Oil (Commentary)	ine Ea	mor).	IVI. 1.	POP	E	*			•		163
	. D.		1				ir	•			103
Cooperative Magnetism in Oxide Structures	s; Pa	ri 1-	Antije	errom	agneti.	sm ai	nd rei	rroma	gnetisn	η.	
L. C. F. BLACKMAN								A			164
The Use of Radioactive Isotopes; Part II—M		gical .	Applic	ation.	s. C.	G. Ci	LAYTO!	N			172
Dyeing of Synthetic Fibres. D. A. GARRETT		9								*	179
The Floating Zone Process. W. BARDSLEY											183
The Oil Ash Corrosion Problem-An Applica	tion of	f the I	Phase	Equil	ibrium	The	ry. \	N. R.	FOSTE	R	189
Science in Parliament										4	196
Survey											197
Book Reviews					. "						203
Organization of Research (Commentary) .											205
Friction Materials. A. A. K. WHITEHOUSE											206
X-Ray Fluorescence Spectroscopy—Application	ons of	a Sin	ple A	ppara	itus us	ing F	Radioa	ctive !	Source	S.	
C. E. MELLISH											212
Cooperative Magnetism in Oxide Structures;	Part I	I-Fe	rrimas	enetis	m. L.	C. F	BLA	СКМА	N		218

## CONTENTS

								Page
The Use of Radioactive Isotopes; Part III-Inorganic Isotope	es in Agi	ricultu	re an	d Biolo	gy.	H. J.	M.	
BOWEN								226
Living Polymers—Their Preparation and Application. J. H. S.	S. GREEN	٧.	*		*			232
Survey	:		*		*			239
Book Reviews								244
					*			245
The Use of Ceramic Materials for Gas Turbine Blades. J. M			•	*	*	•		246
The Design, Manufacture and Testing of Infra-Red Photocell					*			254
Electricity Generation from Moving Gas Streams. R. G. Vo								260
Microwave Amplification by Stimulated Emission of Radiation	on. C. F	C. DIT	CHFI	ELD			*	265
The Thermodynamic Behaviour of Solids. M. A. Jaswon.								274
Survey							*	285
Book Reviews						*		286
Transport (Commentary)	•	*						287
Bunsen, Kirchhoff and the Spectroscope (1859). J. H. S. GRI	EEN	*						288
Organic Semiconductors. D. D. ELEY		*						293
Bismuth Telluride and Related Compounds. D. A. WRIGHT								300
Precision Electrical Measurements. L. HARTSHORN								307
Solid Polyurethane Elastomers. S. H. MORRELL		*						315
Carbon Bricks for Lining Blast Furnaces. D. W. HUBBARD								322
The Molecular Basis of Life. M. F. PERUTZ							*	326
The Pigments of Black Aphids. R. I. T. CROMARTIE.					*			335
Electrostatic Accelerators for Nuclear Research. D. R. CHIC	k and S.	E. H	UNT					340
Gas Lubrication. J. A. COLE		*						348
Automatic Control in the U.S.S.R. R. H. TIZARD							*	356
Survey						*	*	361
Sir Alfred Egerton, F.R.S. (Obituary)								363
Book Reviews						0		364
Man and his Environment (Commentary)								367
Radioisotopes in the Dating of Geological and Archaeological	al Event	s. B.	. J. C	GILETTI	and	R. St	.J.	
LAMBERT								368
Solid State Devices. I. J. RICHMOND								374
A Study of Combustion in Supersonic Flow. R. A. Gross								381
Engineering Design by Digital Computers. B. J. CHALMERS								390
The Growth of Oxide Single Crystals Containing Transition !	Metal Io	ns. F	. W.	HARR	ISON			395
The Measurement of Optical Radiation. E. J. GILLHAM .					4			404
Polyurethane Foams. S. H. Morrell								412
Separating Isotopes of Uranium. F. I. HURLEY		*						417
The Biological Action of Atmospheric Ions. J. RHEINSTEIN								424
The Future of Inland Freight Transport. G. F. FIENNES .								429
Survey								436
Sir Henry Tizard, G.C.B., F.R.S. (Obituary)								439
Book Reviews								440
Theory of Friction of Polymers (Letter to the Editor). J. D. I	HUFFING	TON						443
Economic Potential of Malaya (Commentary)								447
Agricultural Research in Malaya. J. K. COULTER						*		450
The Generation of Direct Current at High Potentials. W. E.	BENNET	Т						455
Slip Casting Metals. P. D. S. St. PIERRE								460
Gas Centrifuges. W. E. GROTH								467
Structure of Liquids. N. E. CUSACK and J. E. ENDERBY .								475
Science in Parliament								482
Survey								483
Book Reviews								487
Electricity Generation from Moving Gas Streams (Letters to	the Edit	tor).	K. H	I. SPRI	NG at	nd D.	T.	
SWIFT-HOOK; R. G. VOYSEY								489
Subject Index and Author Index								401

